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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/510,183

09/30/2004

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EXAMINER

HALL, ASHA J

ART UNIT

PAPER NUMBER

1709

MAIL DATE

DELIVERY MODE

07/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/510,183

Applicant(s)

RANSQUIN ET AL.

Examiner

Asha Hall

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1709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date September 30, 2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Osborn et al. ("Spectral selectivity applied to hybrid concentration systems", Solar Energy Materials, vol. 14, no.3-5, November 1985, p. 301-329).

In regard to claim 1, Osborn et al. discloses a concentrator/Fresnel lens photovoltaic generator as shown in Figure 6, comprising at least one photovoltaic cell covered by a transparent protection layer/glass substrate (page 305) and a reflecting concentrator/Fresnel Lens (page 305) as shown in Figure 6, characterized in that the concentrator is covered by a filter/beamsplitter to eliminate in the luminous flux reflected by the concentrator toward the photoelectric cell most of the "unwanted" radiation that is not able to excite the photovoltaic cell (page 311).

With respect to claim 2, Osborn et al. further discloses that the filter is formed of a layer made from materials/cobalt salts absorbing the "unwanted"/transmit the portion of the spectrum useful to photovoltaic converter (p. 311-312).

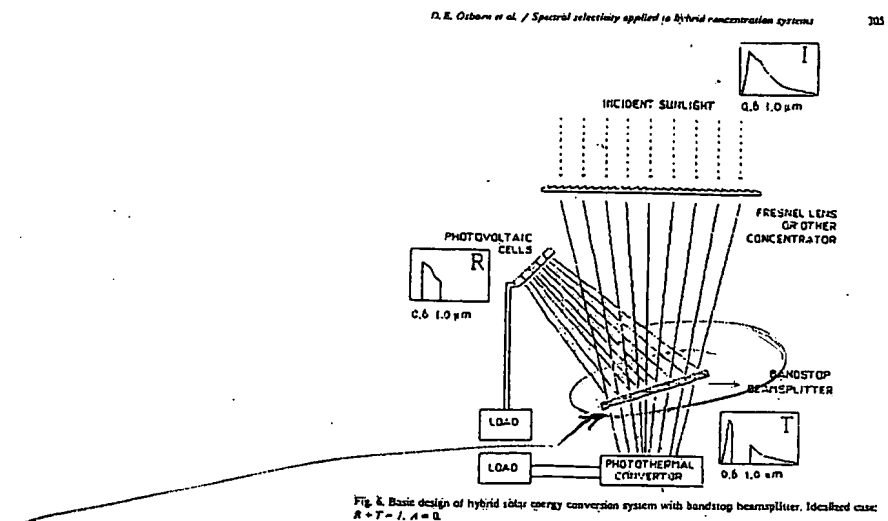
In regard to claim 3, Osborn et al. further discloses that the layer forming the filter is of constant thickness as shown in Figure 18, cobalt salts/liquid filter is contained in a glass channel (p. 303, 312, & 315).

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With respect to claim 4, Osborn et al. further discloses that the filter is formed of a layer whose exterior face is oriented to divert this "unwanted" radiation out of the voltaic cell as shown in Figure 6.

In regard to claim 5, Osborn et al. further discloses that the exterior of the transparent layer is of decreasing thickness so that it is not parallel to the reflecting surface of the concentrator as shown in Figure 6.

Non-uniform thickness



### Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Osborn et al. ("Spectral selectivity applied to hybrid concentration systems", Solar Energy Materials, vol. 14, no.3-5, November 1985, p. 301-329) in view of Leinkram (3,839,108).

Osborn et al. discloses a filter to the hybrid solar energy conversion device as Shown in Figure 6 (page 305), but fails to disclose that the exterior face of the transparent layer forming the filter is etched to form Fresnel steps.

Leinkram discloses Fresnel lens to receive solar radiation (col. 1; lines: 15-19) and further discloses the method of etching the exterior face of the transparent layer to form Fresnel steps (col. 4; lines: 65-68). Also, Leinkram teaches that the precision in his etching methods exceeds the prior art methods and for the first time it is possible to construct a theoretically ideal Fresnel zone plate (col. 5; lines: 7-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the etching methods as taught by Leinkram to the hybrid solar conversion device of Osborn in order to construct a theoretically ideal Fresnel lens/zone plate.

### ***Conclusion***

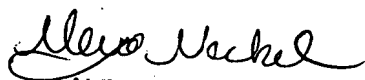
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asha Hall whose telephone number is 571-272-9812. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJH



ALEXA D. NECKEL  
SUPERVISORY PATENT EXAMINER